

1 This listing of claims replaces all prior versions and listings:

2
3 **Listing of Claims:**

4
5 1. (currently amended) A method of formatting a message for
6 exchange between entities on a network, the method comprising:

7 generating a message envelope;

8 generating contents of the message envelope, the contents comprising data
9 structures, each data structure identifies which entity is intended to process the
10 data structure when that entity receives the message envelope over the network,
11 wherein at least one of the data structures includes ~~an explicit request for that~~
12 ~~entity to perform a task~~ an actor attribute specifying the identity of that entity and
13 a mandatory attribute indicating that an entry in the data structure must be
14 understood and processed by that entity.

15
16 2. (previously presented) A method as recited in claim 1, wherein each
17 data structure specifies whether the entity that is intended to process the data
18 structure must understand such data structure.

19
20 3. (original) A method as recited in claim 1, wherein:
21 the message envelope has beginning and ending envelope tags;
22 the contents of the message envelope is between the envelope tags.
23
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1 4. (previously presented) A method as recited in claim 1, wherein the
2 contents include:

3 a header data structure;

4 a body data structure, the body data structure including message data.

5
6 5. (original) A method as recited in claim 4, wherein:

7 the header data structure has beginning and ending header tags;

8 the body data structure has beginning and ending body tags.

9
10 6. (previously presented) A method as recited in claim 4, wherein:

11 the header data structure is intended for at least one intermediate entity;

12 the body data structure is intended for a destination entity.

13
14 7. (original) A method as recited in claim 1 further comprising sending
15 the message envelope to an entity on a network.

16
17 8. (previously presented) A method as recited in claim 1, wherein the
18 data structures lack executable instructions for performing the task.

19
20 9. (original) A method as recited in claim 1, wherein the data
21 structures are expressed in a markup language.

22
23 10. (original) A method as recited in claim 1, wherein the data
24 structures are expressed in XML.

25

1 **11.** (original) A method as recited in claim 1 further comprising:
2 formatting the message envelope for sending over a network using HTTP;
3 sending the message envelope to an entity on the network by using HTTP.

4
5 **12.** (original) A method as recited in claim 1 further comprising:
6 binding the message envelope into a HTTP request;
7 sending the message envelope to an entity on the network by using HTTP.

8
9 **13.** (original) A method as recited in claim 1 further comprising:
10 binding the message envelope into a HTTP response;
11 sending the message envelope to an entity on the network by using HTTP.

12
13 **14.** (original) A method as recited in claim 3, wherein the envelope tags
14 identify the message envelope.

15
16 **15.** (previously presented) A method as recited in claim 5, wherein the
17 header tags identify the header data structure.

18
19 **16.** (previously presented) A method as recited in claim 5, wherein the
20 body tags identify the body data structure.

1 17. (previously presented) A method as recited in claim 4, wherein the
2 message envelope has the following format:

3 <Envelope label>

4 <Header label>

5 *header data*

6 </Header label>

7 <Body label>

8 *message data*

9 </Body label>

10 </Envelope label>

11 the <Envelope label> being a beginning envelope tag, the </Envelope
12 label> being an ending envelope tag, and the Envelope label identifying the
13 message envelope;

14 the <Header label> being a beginning header tag, the </Header label> being
15 an ending header tag, the Header label identifying the header data structure;

16 the <Body label> being a beginning body tag, the </Body label> being an
17 ending body tag, and the Body label identifying the body data structure;

18 the header data being expressed in XML;

19 the message data being expressed in XML.

20
21 18. (canceled)

1 19. (currently amended) A method of delivering a message over a
2 network, the method comprising:

3 transmitting a message envelope of a message from an origin entity to a
4 destination entity via one or more intermediate entities on the network;

5 the message envelope having contents comprising data structures, each data
6 structure identifies which entity is intended to process the data structure when that
7 entity receives the message envelope over the network, wherein at least one of the
8 data structures includes ~~an explicit request for the destination entity to perform a~~
9 task an actor attribute specifying the identity of the destination entity and a
10 mandatory attribute indicating that an entry in the data structure must be
11 understood and processed by the destination entity.

12
13 20. (previously presented) A method as recited in claim 19, wherein
14 each data structure specifies whether the entity that is intended to process the data
15 structure must understand such data structure when that entity receives the
16 message envelope over the network.

17
18 21. (original) A method as recited in claim 19, wherein:
19 the message envelope has beginning and ending envelope tags;
20 the contents of the message envelope is between the envelope tags.

21
22 22. (previously presented) A method as recited in claim 19, wherein the
23 contents include:

24 a header data structure;

25 a body data structure, the body data structure including message data.

1 **23.** (original) A method as recited in claim 22, wherein:
2 the header data structure has beginning and ending header tags;
3 the body data structure has beginning and ending body tags.
4

5 **24.** (original) A method as recited in claim 22, wherein:
6 the header data structure is intended for at least one intermediate entity;
7 the body data structure is intended for a destination entity.
8

9 **25.** (previously presented) A method as recited in claim 19, wherein the
10 data structures lack executable instructions for performing the task.
11

12 **26.** (original) A method as recited in claim 19, wherein at least one of
13 the data structures includes a request for an intermediate entity to perform a task.
14

15 **27.** (original) A method as recited in claim 19, wherein the data
16 structures are expressed in a markup language.
17

18 **28.** (original) A method as recited in claim 19, wherein the data
19 structures are expressed in XML.
20

21 **29.** (original) A method as recited in claim 19 further comprising:
22 formatting the message envelope for sending over a network using HTTP;
23 sending the message envelope to an entity on the network by using HTTP.
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1 **30.** (original) A method as recited in claim 19 further comprising:
2 binding the message envelope into a HTTP request;
3 sending the message envelope to an entity on the network by using HTTP.

4
5 **31.** (original) A method as recited in claim 19 further comprising:
6 binding the message envelope into a HTTP response;
7 sending the message envelope to an entity on the network by using HTTP.

8
9 **32.** (original) A method as recited in claim 21, wherein the envelope
10 tags identify the message envelope.

11
12 **33.** (previously presented) A method as recited in claim 23, wherein the
13 header tags identify the header data structure.

14
15 **34.** (previously presented) A method as recited in claim 23, wherein the
16 body tags identify the body data structure.

1 **35.** (previously presented) A method as recited in claim 22, wherein the
2 message envelope has the following format:

3 <Envelope label>

4 <Header label>

5 *header data*

6 </Header label>

7 <Body label>

8 *message data*

9 </Body label>

10 </Envelope label>

11 the <Envelope label> being a beginning envelope tag, the </Envelope
12 label> being an ending envelope tag, and the Envelope label identifying the
13 message envelope;

14 the <Header label> being a beginning header tag, the </Header label> being
15 an ending header tag, the Header label identifying the header data structure;

16 the <Body label> being a beginning body tag, the </Body label> being an
17 ending body tag, and the Body label identifying the body data structure;

18 the header data being expressed in XML;

19 the message data being expressed in XML.

20
21 **36.** (canceled)

1 37. (currently amended) A method of parsing a message received by a
2 receiving entity over a network from a sending entity, the method comprising:

3 parsing a message envelope;

4 parsing contents of the message envelope, the contents comprising data
5 structures, each data structure identifies which entity is intended to process the
6 data structure when that entity receives the message envelope over the network,
7 wherein at least one of the data structures includes ~~an explicit request for the~~
8 ~~receiving entity to perform a task~~ an actor attribute specifying the identity of the
9 receiving entity and a mandatory attribute indicating that an entry in the data
10 structure must be understood and processed by the receiving entity.

11
12 38. (previously presented) A method as recited in claim 37, wherein
13 each data structure specifies whether the entity that is intended to process the data
14 structure must understand such data structure when that entity receives the
15 message envelope over the network.

16
17 39. (previously presented) A method as recited in claim 38 further
18 comprising if the entity that is intended to process the data structure does not
19 understand such data structure, sending a response message to the sending entity
20 that indicates that the entity did not understand such data structure.

21
22 40. (original) A method as recited in claim 37 further comprising
23 sending a response message to the sending entity on the network.
24
25

1 **41.** (original) A method as recited in claim 37, wherein:
2 the message envelope has beginning and ending envelope tags;
3 the contents of the message envelope is between the envelope tags.
4

5 **42.** (previously presented) A method as recited in claim 37, wherein the
6 contents include:

7 a header data structure;
8 a body data structure, the body data structure including message data.
9

10 **43.** (original) A method as recited in claim 42, wherein:
11 the header data structure has beginning and ending header tags;
12 the body data structure has beginning and ending body tags.
13

14 **44.** (original) A method as recited in claim 42, wherein:
15 the header data structure is intended for at least one intermediate entity;
16 the body data structure is intended for a destination entity.
17

18 **45.** (previously presented) A method as recited in claim 37, wherein the
19 data structures lack executable instructions for performing the task.
20

21 **46.** (original) A method as recited in claim 37, wherein the data
22 structures are expressed in a markup language.
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24 **47.** (original) A method as recited in claim 37, wherein the data
25 structures are expressed in XML.

1 48. (canceled)

2
3 49. (currently amended) A computer-readable storage medium having
4 computer-executable instructions that, when executed by a computer, performs a
5 method of formatting a message for exchange between entities on a network, the
6 method comprising:

7 generating a message envelope;

8 generating contents of the message envelope, the contents comprising data
9 structures, each data structure identifies which entity is intended to process the
10 data structure when that entity receives the message envelope over the network,
11 wherein at least one of the data structures includes ~~an explicit request for that~~
12 ~~entity to perform a task~~ an actor attribute specifying the identity of that entity and
13 a mandatory attribute indicating that an entry in the data structure must be
14 understood and processed by that entity.

1 **50.** (currently amended) A computer-readable storage medium having
2 computer-executable instructions that, when executed by a computer, performs a
3 method of delivering a message between entities on a network, the method
4 comprising:

5 transmitting a message envelope of a message from an origin entity to a
6 destination entity via one or more intermediate entities on the network;

7 the message envelope having contents comprising data structures, each data
8 structure identifies which entity is intended to process the data structure when that
9 entity receives the message envelope over the network, wherein at least one of the
10 data structures includes ~~an explicit request for the destination entity to perform a~~
11 task an actor attribute specifying the identity of the destination entity and a
12 mandatory attribute indicating that an entry in the data structure must be
13 understood and processed by the destination entity.

1 51. (currently amended) A computer-readable storage medium having
2 computer-executable instructions that, when executed by a computer, performs a
3 method of parsing a message received by a receiving entity over a network from a
4 sending entity, the method comprising:

5 parsing a message envelope of a message;

6 parsing contents of the message envelope, the contents comprising data
7 structures, each data structure identifies which entity is intended to process the
8 data structure when that entity receives the message envelope over the network,
9 wherein at least one of the data structures includes ~~an explicit request for the~~
10 ~~receiving entity to perform a task~~ an actor attribute specifying the identity of the
11 receiving entity and a mandatory attribute indicating that an entry in the data
12 structure must be understood and processed by the receiving entity.

13
14 52. (currently amended) A message exchange apparatus comprising:

15 a processor;

16 a message formatter executable on the processor to:

17 generate a message envelope of a message;

18 generate contents of the message envelope, the contents comprising
19 data structures, each data structure identifies which entity is intended to
20 process the data structure when that entity receives the message envelope
21 over the network, wherein at least one of the data structures includes ~~an~~
22 ~~explicit request for that entity to perform a task~~ an actor attribute specifying
23 the identity of that entity and a mandatory attribute indicating that an entry
24 in the data structure must be understood and processed by that entity.
25

1 **53.** (currently amended) A message exchange apparatus comprising:

2 a processor;

3 a message deliverer executable on the processor to:

4 transmit a message envelope of a message from an origin entity to a
5 destination entity via one or more intermediate entities on the network;

6 the message envelope having contents comprising data structures,
7 each data structure identifies which entity is intended to process the data
8 structure when that entity receives the message envelope over the network,
9 wherein at least one of the data structures includes ~~an explicit request for~~
10 ~~the destination entity to perform a task~~ an actor attribute specifying the
11 identity of the destination entity and a mandatory attribute indicating that
12 an entry in the data structure must be understood and processed by the
13 destination entity.

1 54. (currently amended) A message exchange apparatus comprising:

2 a processor;

3 a message parser executable on the processor to:

4 parse a message envelope of a message;

5 parse contents of the message envelope, the contents comprising
6 data structures, each data structure identifies which entity is intended to
7 process the data structure when that entity receives the message envelope
8 over the network, wherein at least one of the data structures includes ~~an~~
9 explicit request for that entity to perform a task an actor attribute specifying
10 the identity of that entity and a mandatory attribute indicating that an entry
11 in the data structure must be understood and processed by that entity.

1 **55.** (currently amended) A message envelope generated in accordance
2 with the following acts:

3 providing a sending entity in communication with a network of entities;

4 generating contents of the message envelope of a message, the contents
5 comprising:

6 a header data structure ~~which identifies an intermediate entity as that which~~
7 ~~is intended to process the header data structure and whether that intermediate~~
8 ~~entity must understand such data structure~~ having an actor attribute specifying the
9 identity of an intermediate entity and a mandatory attribute indicating that an entry
10 in the header data structure must be understood and processed by the intermediate
11 entity; and

12 a body data structure which identifies a destination entity as that which is
13 intended to process the body data structure;

14 ~~wherein at least one of the data structures includes an explicit request for at~~
15 ~~least one of the entities to perform a task.~~

16
17 **56.** (original) A message envelope as recited in claim 55, wherein the
18 data structures are expressed in a markup language.

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20 **57.** (original) A message envelope as recited in claim 55, wherein the
21 data structures are expressed in XML.

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1 58. (currently amended) A modulated data signal having computer-
2 executable instructions embodied thereon comprising:

3 a header data structure ~~which identifies an intermediate entity, over a~~
4 ~~network of entities, as that which is intended to process the header data structure~~
5 ~~and whether that intermediate entity must understand such data structure~~ having an
6 actor attribute specifying the identity of an intermediate entity, over a network of
7 entities, and a mandatory attribute indicating that an entry in the header data
8 structure must be understood and processed by the intermediate entity; and

9 a body data structure which identifies the destination entity as that which is
10 intended to process the body data structure;

11 ~~wherein at least one of the data structures includes an explicit request for at~~
12 ~~least one of the entities to perform a task.~~

13
14 59. (original) A modulated data signal as recited in claim 58, wherein
15 the data structures are expressed in a markup language.

16
17 60. (original) A modulated data signal as recited in claim 58, wherein
18 the data structures are expressed in XML.

1 61. (currently amended) A computer-readable medium having a data
2 structure embodied thereon comprising:

3 a header data-structure section ~~which identifies an intermediate entity, over~~
4 ~~a network of entities, as that which is intended to process the header data-structure~~
5 ~~section and whether that intermediate entity must understand such data-structure~~
6 section having an actor attribute specifying the identity of an intermediate entity,
7 over a network of entities, and a mandatory attribute indicating that an entry in the
8 header data-structure section must be understood and processed by the
9 intermediate entity; and

10 a body data-structure section which identifies the destination entity as that
11 which is intended to process the body data-structure section;

12 ~~wherein at least one of the data-structures includes an explicit request for at~~
13 ~~least one of the entities to perform a task.~~

14
15 62. (original) A computer-readable medium as recited in claim 61,
16 wherein the data-structure sections are expressed in a markup language.

17
18 63. (original) A computer-readable medium as recited in claim 61,
19 wherein the data-structure sections are expressed in XML.
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1 64. (currently amended) A method of formatting a message for
2 exchange between entities on a network, the method comprising:

3 generating a message envelope of a message, the message comprising at
4 least one explicit request by one entity on a network of another entity on the
5 network to perform a task;

6 generating contents of the message envelope, the contents comprising data
7 structures, ~~each~~ at least one data structure having an actor attribute specifying the
8 identity of that entity indicated in the at least one explicit request and a mandatory
9 attribute indicating that an entry in the data structure must be understood and
10 processed by that entity ~~identifies which entity is intended to process the data~~
11 ~~structure when that entity receives the message envelope over the network.~~

12
13 65. (previously presented) A method as recited in claim 64, wherein
14 each data structure specifies whether the entity that is intended to process the data
15 structure must understand such data structure.

16
17 66. (previously presented) A method as recited in claim 64, wherein
18 each data structure specifies whether the entity that is intended to process the data
19 structure must respond if it does not understand such data structure.

20
21 67. (previously presented) A method as recited in claim 64, wherein:
22 the message envelope has beginning and ending envelope tags;
23 the contents of the message envelope is between the envelope tags.
24
25

1 **68.** (previously presented) A method as recited in claim 64, wherein the
2 contents include:

3 a header data structure;

4 a body data structure, the body data structure including message data.

5
6 **69.** (previously presented) A method as recited in claim 68, wherein:
7 the header data structure has beginning and ending header tags;
8 the body data structure has beginning and ending body tags.

9
10 **70.** (previously presented) A method as recited in claim 68, wherein:
11 the header data structure is intended for at least one intermediate entity;
12 the body data structure is intended for a destination entity.

13
14 **71.** (previously presented) A method as recited in claim 64 further
15 comprising sending the message envelope to an entity on a network.

16
17 **72.** (previously presented) A method as recited in claim 64, wherein at
18 least one of the data structures includes a request for an entity to perform a task,
19 wherein the data structures lack executable instructions for performing the task.

20
21 **73.** (previously presented) A method as recited in claim 64, wherein the
22 data structures are expressed in a markup language.

23
24 **74.** (previously presented) A method as recited in claim 64, wherein the
25 data structures are expressed in XML.

1 75. (previously presented) A method as recited in claim 64 further
2 comprising:

3 formatting the message envelope for sending over a network using HTTP;
4 sending the message envelope to an entity on the network by using HTTP.

5
6 76. (previously presented) A method as recited in claim 64 further
7 comprising:

8 binding the message envelope into a HTTP request;
9 sending the message envelope to an entity on the network by using HTTP.

10
11 77. (previously presented) A method as recited in claim 64 further
12 comprising:

13 binding the message envelope into a HTTP response;
14 sending the message envelope to an entity on the network by using HTTP.

15
16 78. (previously presented) A method as recited in claim 69, wherein the
17 header tags identify the header data structure.

18
19 79. (previously presented) A method as recited in claim 69, wherein the
20 body tags identify the body data structure.